

Diabetes Dateline

National Diabetes Information Clearinghouse

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National
Institute of
Diabetes and
Digestive
and Kidney
Diseases

NATIONAL
INSTITUTES
OF HEALTH

Most People With Diabetes Do Not Meet Treatment Goals

Study finds little improvement in past decade

Less than 12 percent of people with diagnosed diabetes meet the recommended goals for blood glucose, blood pressure, and cholesterol despite a great deal of research showing that controlling these conditions dramatically delays or prevents diabetes complications. Moreover, the percentage of people who achieve

these targets has changed little in the past decade, according to a study published in the January 21, 2004, issue of the *Journal of the American Medical Association*.

“More diabetes patients are taking medication to control their blood pressure and cholesterol, but too few are making needed lifestyle changes such as exercising, lowering dietary fat, and losing weight to control the risk factors for diabetes complications,” noted author Dr. Catherine Cowie of the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), one of the National Institutes of Health.

The researchers compared data obtained from a nationally representative sample of U.S. adults age 20 years and older with diagnosed diabetes who took part in either the Third National Health and Nutrition Examination Survey (NHANES III) conducted from 1988 to 1994 or the NHANES conducted from 1999 to 2000.

Participants in the later survey, though similar in age and gender, were heavier, diagnosed with diabetes younger, and more likely to be using insulin along with oral drugs to treat their diabetes. Only 37 percent (compared to 44 percent in the earlier NHANES) were achieving the American Diabetes Association’s (ADA) goal for blood glucose control—a hemoglobin A1c (A1C) blood test result of less than 7 percent. About 37 percent of participants in the later survey had A1C levels above 8 percent, ADA’s recommended “take action” level.

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U.S. Department
of Health and
Human Services

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Tight Glucose Control in Diabetes Lowers Risk of Atherosclerosis

Strict glucose control in type 1 diabetes reduces the risk of atherosclerosis, a benefit that persists for years, according to a study published in the June 5, 2003, issue of the *New England Journal of Medicine*.

Since 1993, when the Diabetes Control and Complications Trial (DCCT) ended, researchers have known that intensive glucose control greatly reduces the eye, nerve, and kidney damage of type 1 diabetes. Now, researchers conclude, the benefits of tight control also extend to the heart. “Intensive control is difficult to achieve and maintain, but its benefits are even greater than we realized,” says study chair Dr. Saul Genuth of the Case Western Reserve University. “The earlier intensive therapy begins and the longer it can be maintained, the better the chances of reducing the debilitating complications of diabetes.”

The DCCT was a multicenter study that compared intensive versus conventional management of blood glucose in 1,441 people with type 1 diabetes. Patients on intensive treatment kept glucose levels as close to normal as possible with at least three insulin injections a day or an insulin pump and frequent self-monitoring of blood glucose. Intensive treatment aimed to keep A1C, which reflects average blood glucose over 2 to 3 months, to as close to normal (6 percent) as possible. Conventional treatment at that time consisted of one or two insulin injections a day with daily urine or blood glucose testing.

After 6½ years of the DCCT, A1C levels averaged 7.2 percent in the intensively treated group and 9 percent in the conventionally treated group. When the DCCT ended, those who had been assigned to conventional treatment were encouraged to adopt intensive control and shown how to do it, and researchers began a long-term followup study of the participants, called the Epidemiology of Diabetes Interventions and Complications (EDIC) study.

The DCCT could not study atherosclerosis because the participants were relatively young,

and heart disease takes years to develop. In 1994–95 and again in 1998–2000, EDIC researchers used ultrasound to measure the thickness of participants’ carotid arteries, the two blood vessels in the neck that carry blood from the heart to the brain. Carotid wall thickness reflects the amount of atherosclerosis, or plaque buildup, in the artery: the thicker the arterial wall, the greater the risk of later heart attack and stroke.

At the time of their first ultrasound, the diabetic participants’ carotid wall thickness was similar to that of nondiabetic controls matched for age and gender. Five years later, however, the participants had thicker arterial walls than those of the non-diabetic group. In addition, the thickness of the carotid walls had increased less in the intensively treated group during the 5 years than in the conventionally treated group. “This finding strongly suggests that atherosclerosis progressed more slowly in the intensively treated group,” noted Dr. Genuth. Carotid thickening was also linked to known cardiovascular risk factors including age, higher systolic blood pressure, smoking, LDL-to-HDL cholesterol ratio, and urinary albumin (a measure of kidney function). After adjusting for these factors, the study found that the differences in carotid wall thickness between the two groups were due to the differences in blood glucose levels during the DCCT.

“The risk of heart disease is about 10 times higher in people with type 1 diabetes than in people without diabetes, but it was unclear to what extent blood glucose contributed to the development of heart disease,” said Dr. David Nathan of Massachusetts General Hospital, who co-chaired the DCCT/EDIC research group. “Now we know that intensively controlled glucose significantly reduces the atherosclerosis underlying heart disease just as it reduces damage to the eyes, nerves, and kidneys in people with type 1 diabetes. What’s striking is that the benefits of intensive control persisted despite a gradual rise in the A1C levels of the

ATHEROSCLEROSIS, continued on page 6

New Fact Sheets Released: *Insulin Resistance and Pre-Diabetes; Diabetes Prevention Program*

The National Diabetes Information Clearinghouse has published two new fact sheets: *Insulin Resistance and Pre-Diabetes* and *Diabetes Prevention Program*. Both provide the latest information on strategies for preventing or delaying type 2 diabetes in those at risk.

The *Insulin Resistance and Pre-Diabetes* fact sheet explains the causes, symptoms, and diagnosis of

insulin resistance, metabolic syndrome, and pre-diabetes. Readers can refer to a body mass index table to evaluate body weight relative to height. The fact sheet summarizes the results of the DPP and discusses strategies that can prevent or delay type 2 diabetes. You can view the fact sheet online at www.diabetes.niddk.nih.gov by clicking on its title in the A-to-Z list.

The *Diabetes Prevention Program* fact sheet summarizes the findings of the Diabetes Prevention Program (DPP); this major 3-year clinical trial showed that diet and exercise sharply reduced the chances that a person with impaired glucose tolerance would develop type 2 diabetes. The fact sheet defines type 2 diabetes and pre-diabetes and also lists the risk factors for type 2 diabetes. You can view it online at www.diabetes.niddk.nih.gov.

Printed copies of both fact sheets can be ordered by using our online catalog at www.catalog.niddk.nih.gov or by using the form on page 15. ■



Follow-up Study Shows That Tight Control Slows the Progression of Kidney Disease

Benefits of strict glucose control in type 1 diabetes persist years after intensive therapy, slowing the progression of diabetic nephropathy, according to a study published in the October 22–29, 2003, issue of the *New England Journal of Medicine*.

Results from the Epidemiology of Diabetes Interventions and Complications (EDIC) study, a follow-up of participants in the Diabetes Control and Complications Trial (DCCT), showed that 7 to 8 years after the conclusion of the DCCT, participants who maintained strict control of glucose levels during the DCCT had decreased excretion of albumin (a precursor of end-stage renal disease) and reduced incidence of hypertension com-

pared with participants who had higher average blood glucose levels during the DCCT. These effects occurred even though the difference in mean hemoglobin A1C value between the two former treatment groups differed by only 0.2 percent during the follow-up study period. The mean hemoglobin A1C values in the intensive-treatment group gradually rose after the DCCT study concluded.

Although the mechanism for this protective effect is not yet known, the authors suggest that those with type 1 diabetes begin intensive treatment as early as possible to slow the development of diabetic microvascular disease. ■

NDIC Updates *Hypoglycemia* Fact Sheet

The National Diabetes Information Clearinghouse (NDIC) has updated its comprehensive fact sheet on hypoglycemia (low blood glucose). The 8-page fact sheet provides easy-to-understand explanations of the symptoms, causes, prevention, and treatment of hypoglycemia. Also included is a table summarizing normal and target blood glucose ranges. An interactive section highlights questions for patients to ask their doctors about diabetes medications. In addition, the fact sheet explains the symptoms,



and treatment of hypoglycemia in people who do not have diabetes, including information on reactive and fasting hypoglycemia.

You can access this fact sheet online from the A-to-Z list at www.diabetes.niddk.nih.gov, or use the online catalog at www.catalog.niddk.nih.gov or the order form on page 15 to order printed copies. ■

NDEP Launches *www.BetterDiabetesCare.nih.gov* to Promote Improved Diabetes Care

The National Diabetes Education Program (NDEP) has launched a comprehensive web resource to promote systems changes to improve diabetes care. *BetterDiabetesCare.nih.gov* (formerly *betterdiabetescare.org*) reflects the work of experts from NDEP partner organizations. The website was developed to help reduce the gap between current and desired patient outcomes by helping users structure better systems for diabetes care.

The Better Diabetes Care site is designed to help health care providers, educators, policy makers, planners, and purchasers make changes in systems of care for people with diabetes. The easy-to-use site can help practitioners achieve effective results, whether they are experienced in quality improvement or new to the challenge. State-of-the-art materials and tools help users to focus energy, time, and resources; assess needs and set priorities for change; plan strategies for realistic actions; reduce barriers to change; implement effective changes; evaluate process, outcomes, and costs; and improve patient outcomes.

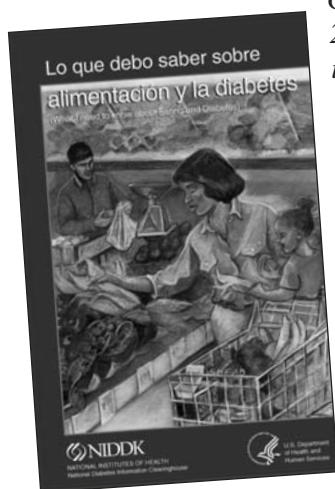
The site provides models for systems change, examples of best practices, and links to many



resources and references. Evidence-based decision-making and the implementation of an efficient and reliable information system are presented as the underpinnings of a quality care system. The website will be updated regularly and modified according to user need. Visitors to the site are urged to fill out the feedback form to help the NDEP make revisions to the site as needed. ■

New Spanish Translations Available From NDIC

“More Spanish translations!” That’s what our customer satisfaction survey is telling us you want and we’re listening. The NDIC has just published Spanish versions of two frequently requested publications and several other translations are on the way. Now available are Spanish versions of the booklets *What I Need to Know About Eating and Diabetes* (*Lo que debo saber sobre alimentación y la diabetes*) and *Your Guide to Diabetes: Type 1 and Type 2* (*Guía para personas con diabetes tipo 1 y tipo 2*).



What I Need to Know About Eating and Diabetes is a compilation of the three-booklet meal planning series *I Have Diabetes: What Should I Eat?* (*Tengo Diabetes: ¿Qué Debo Comer?*), *I Have Diabetes: How Much Should I Eat?* (*Tengo Diabetes: ¿Cuánto Debo Comer?*), and *I Have Diabetes: When Should I Eat?* (*Tengo Diabetes: ¿Cuándo Debo Comer?*).

This easy-to-read booklet includes

- an explanation of the diabetes food pyramid and a description of each of the food groups, with guidelines on choosing serving sizes
- general suggestions on the number of servings to meet three different daily calorie targets
- suggested blood glucose targets
- general guidelines on managing blood glucose levels
- “need-to-know” information on physical activity
- treatment guidelines on hypoglycemia and strategies for sick days

Interactive sections provide opportunities for people to personalize the booklet with information about their own blood glucose targets; meal times; medication names, dosages, and schedules; recommended number of servings for each food group in the pyramid; sample menus; and serving sizes.

The booklet is available online at www.diabetes.niddk.nih.gov under “Spanish.”

Your Guide to Diabetes: Type 1 and Type 2 (*Guía para personas con diabetes tipo 1 y tipo 2*) is now available as well. This comprehensive, 62-page reference provides essential information in a generously illustrated format for people with type 1 and type 2 diabetes. It includes definitions of the different types of diabetes; target levels for blood glucose, blood pressure, and blood lipids; recommendations for daily self-care; strategies for preventing diabetes complications; suggestions for care in special situations such as sick days; and a list of resources for additional information.



This booklet is suitable for those who are newly diagnosed or for people who have had diabetes for many years and need a review of the basics. Instructions are given throughout the booklet for those who use insulin and those who do not. You can view this publication online at www.diabetes.niddk.nih.gov under “Spanish.” The English version can be accessed at www.diabetes.niddk.nih.gov from the A-to-Z list of topics and titles.

Spanish translations of two additional NDIC publications will be available in 2004:

- *Am I at Risk for Type 2 Diabetes?*
- *The Diabetes Dictionary*

Printed copies of NDIC publications can be ordered using our online catalog at www.catalog.niddk.nih.gov or by using the form on page 15. ■

NDIC Provides a Variety of Services Through Multiple Avenues

The clearinghouse has its work cut out for itself. With the continued increase in the prevalence of diabetes, the National Diabetes Information Clearinghouse (NDIC) keeps very busy answering questions about all aspects of diabetes from people with diabetes, the general public, and health professionals. This past year, NDIC answered 21,573 such requests in the form of emails, letters, faxes, phone calls, and in person at exhibits and conferences. We responded to

- 5,725 emails
- 3,218 letters
- 1,179 faxes
- 9,919 telephone calls
- 340 requests from professional conferences
- 180 emails written in Spanish
- 1,012 telephone calls from Spanish-speaking callers

What We Send

We can answer questions by sending one or more of our publications or directing the customer to view them online. If the request requires research or specialized information, however, our information specialists turn to the Internet, medical journals, searches compiled from the Combined Health Information Database (CHID), or information packets. This past year, we answered requests by sending

- 486,528 NDIC publications
- 551 attachments of a related article

- 1,878 information packets of articles
- 96 compiled searches from CHID

What's Hot!

Our most popular publications this past year were

- *Your Guide to Diabetes: Type 1 and Type 2*
- *What I Need to Know About Eating and Diabetes*
- *Prevent Diabetes Problems: Keep Your Diabetes Under Control*

Coming Soon...

At NDIC, we are always developing new publications. Topic ideas come from our customers and recent scientific developments. All of our publications go through rigorous review by experts at the National Institutes of Health and at institutions across the country. If you have an idea for a new publication, please email us at ndic@info.niddk.nih.gov.

Look for these publications in the near future:

- *Causes of Diabetes* fact sheet
- *Diabetes, Heart Disease, and Stroke* fact sheet
- *Sexual and Urologic Problems of Diabetes* fact sheet
- *What I Need to Know About Physical Activity and Diabetes* easy-to-read booklet
- *What I Need to Know About Gestational Diabetes* easy-to-read booklet ■

ATHEROSCLEROSIS, continued from page 2

intensively treated group during the 5 years after DCCT ended.”

“For many people, diabetes is difficult to manage with today’s tools. Every new finding about the importance of blood glucose control in preventing complications heightens our determination to foster research that results in new therapies that take the burden off the patient,” said Dr. Judith Fradkin, director of the Diabetes, Endocrinology, and Metabolic Diseases Division of the National

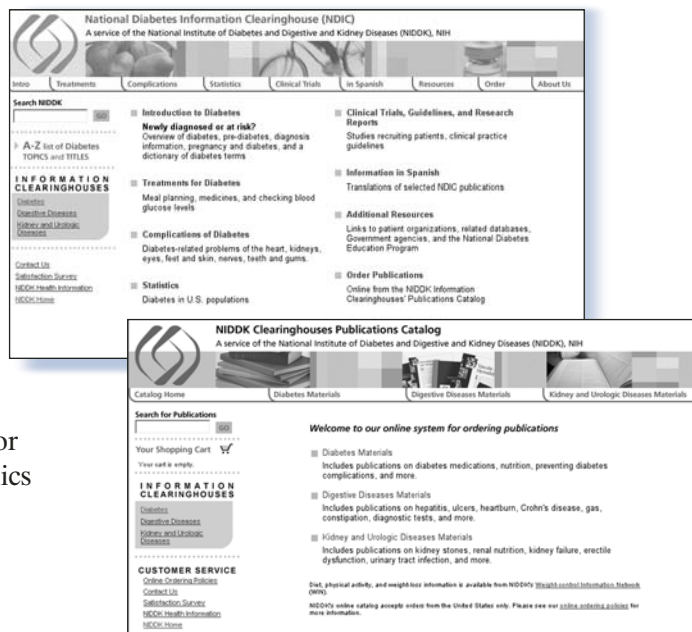
Institute of Diabetes and Digestive and Kidney Diseases (NIDDK).

DCCT and EDIC were supported by the NIDDK, the National Eye Institute, the National Institute of Neurological Disorders and Stroke, and the National Center for Research Resources, all components of the National Institutes of Health under the Department of Health and Human Services. The studies also received support from Genentech, Inc., through a Cooperative Research and Development Agreement with the NIDDK. ■

What You Need to Know About NDIC Online

The National Diabetes Information Clearinghouse (NDIC) has a new look and a new way to order publications. You can see our new colors, design, and navigation features at www.diabetes.niddk.nih.gov.

Many customers of NDIC have asked to order publications online and to use credit cards to pay for bulk orders. Now they can. The NIDDK has also launched the NIDDK publications catalog website at www.catalog.niddk.nih.gov, where folks can fill their shopping carts with free single copies or low-cost bulk orders for their practices and clinics and pay with plastic. ■



Prevent Diabetes Problems Series Updated

The NDIC's seven-booklet easy-to-read series on preventing diabetes problems was recently updated with the most recent targets for blood glucose, blood pressure, and blood lipids. We also added series numbers on the covers to make assembling a set—or identifying a missing title—quick and easy. The Spanish translations of the updates will be available in 2004. This illustrated series describes the long-term complications of diabetes and provides suggestions for preventing or delaying these problems.

Booklet titles are

- No. 1: *Prevent Diabetes Problems: Keep Your Diabetes in Control*
- No. 2: *Prevent Diabetes Problems: Keep Your Heart and Blood Vessels Healthy*
- No. 3: *Prevent Diabetes Problems: Keep Your Kidneys Healthy*

- No. 4: *Prevent Diabetes Problems: Keep Your Eyes Healthy*
- No. 5: *Prevent Diabetes Problems: Keep Your Feet and Skin Healthy*
- No. 6: *Prevent Diabetes Problems: Keep Your Nerves Healthy*
- No. 7: *Prevent Diabetes Problems: Keep Your Teeth and Gums Healthy*

The Prevent Diabetes Problems series along with the *Diabetes Dictionary*, *Medicines for People With Diabetes*, *What I Need to Know About Eating and Diabetes*, and a motivational refrigerator magnet make up the Diabetes Library Boxed Set. Customers can obtain a single boxed set at no charge.

To view the series booklets, go to the A-to-Z list at www.diabetes.niddk.nih.gov. You can order the booklets in print from our online catalog at www.catalog.niddk.nih.gov or by using the form on page 15. ■

NDIC Marks 25th Anniversary

The National Diabetes Information Clearinghouse (NDIC) is commemorating its 25th anniversary. A quarter century has passed since Congress established the NDIC with Title IV of the Public Health Service Act in response to a recommendation by the National Commission on Diabetes. “Over the years, the National Diabetes Information Clearinghouse has been hugely successful in translating advances in diabetes research into public health information, serving as a direct link between the NIH and the



public,” said Dr. Sanford Garfield, Senior Advisor for the Biometry and Behavioral Research Program, NIDDK. “Creation of the NDIC showed incredible foresight, considering the important research that has taken place in diabetes in the past 30 years. NDIC will only become more important in the future.”

NDIC’s mission is to provide information about diabetes to health care professionals, people with diabetes and their families, and the general public. In the years since its inception, NDIC has established its reputation in the diabetes community as shown by these comments from its customer satisfaction survey:

“You provide a wonderful service. Diabetes is a very frightening disease but after reading the booklets, I feel that I have now the necessary tools that I need to help my husband manage his [diabetes].”

“The information is the best and easiest to understand that I have ever received.”

“I love your booklets.”

“The clearinghouse is an invaluable resource to educators and researchers.”

“Finally—in-depth information for the Spanish-speaking population.”

NDIC’s primary audiences are diabetes educators and other health care professionals to whom people with diabetes look for guidance. NDIC’s roles and responsibilities include

- responding to inquiries from health care professionals, people with diabetes and their families, and the public
- developing and producing patient education materials for health care professionals and people with diabetes
- networking with voluntary and professional associations to serve as a direct link between the National Institute of Diabetes and Digestive and Kidney Diseases and the diabetes community
- disseminating information about diabetes research results, advancements in medical care, and the epidemiology of diabetes through various communication channels, both verbal and written
- anticipating future trends in technology that will make NDIC publications and services accessible to health care professionals, people with diabetes, and the general public in as many ways as possible to reach the largest audience
- assessing the need for, as well as developing, distributing, and promoting, publications that meet the diverse information needs of the audience, from people with limited literacy skills to consumers with abilities to use computer technology, from health care professionals in general practice to diabetes educators, physician specialists, and the media
- identifying and collecting diabetes-related materials and information relevant to patient and professional education
- organizing, abstracting, and indexing this information in the Combined Health Information Database (CHID)

NDIC staff look forward to continuing to provide services to the diabetes community. ■

CHID Online: What's New?

CHID Online, the Combined Health Information Database, contains thousands of summaries of professional resources and patient education materials about diabetes and other diseases. To view descriptions of the many books, pamphlets, journal articles, videos, and manuals in the diabetes subfile, go to www.chid.nih.gov on the Internet. Each entry includes information on how to obtain copies of the items.

Spotlighted Additions

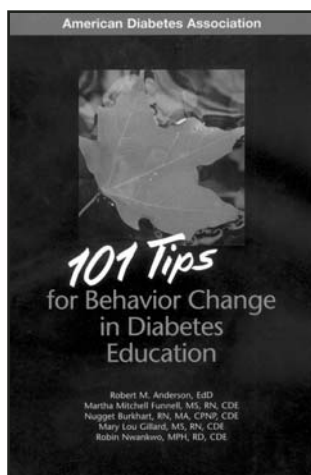
101 Tips for Behavior Change in Diabetes Education. Book (English). Robert M. Anderson, Ed.D., Martha Mitchell Funnell, M.S., R.N., C.D.E., Nugget Burkhardt, R.N., M.A., C.P.N.P., C.D.E., Mary Lou Gillard, M.S., R.N., C.D.E.,

Robin Nwankwo, M.P.H., R.D., C.D.E. 2002. American Diabetes Association, Alexandria, Virginia. 142 pages.

Written by diabetes educators at the University of Michigan Diabetes Research and Training Center, this book of tips provides practical suggestions and ideas for facilitating self-directed behavior change in people with diabetes. Each tip is formatted as the answer to a common

concern. The book begins

with a summary of various approaches to behavior change, including empowerment, the health belief model, motivational interviewing, and the stages of change model. Additional chapters cover approaches to assessment, dealing with emotions, choosing to change, motivation, attitudes, beliefs and values, goal-setting, social support, challenging patients, eating and physical activity, educator-patient relationships, help from other health professionals, educator concerns, and pediatrics.

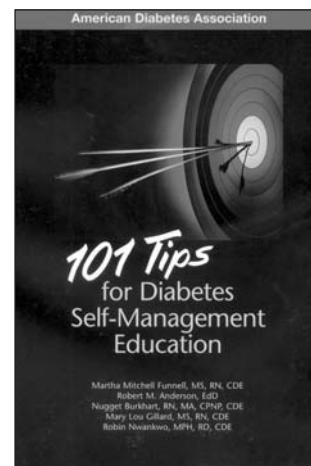


CHID_{online}

101 Tips for Diabetes Self-Management Education. Book (English). Martha Mitchell Funnell, M.S., R.N., C.D.E., Robert M. Anderson, Ed.D., Nugget Burkhardt, R.N., M.A., C.P.N.P., C.D.E., Mary Lou Gillard, M.S., R.N., C.D.E., Robin Nwankwo, M.P.H., R.D., C.D.E. 2002. American Diabetes Association, Alexandria, Virginia. 150 pages.

This book, also written by diabetes educators at the University of Michigan Diabetes Research and Training Center, is filled with concise and practical advice for health care

providers who are starting a diabetes education program or for those needing new ideas for existing group and individual teaching programs. Presented in a question-and-answer format, the tips are organized into 16 chapters that cover developing diabetes self-management education programs, creating a mission statement and vision for a patient education program, designing the curriculum, evaluating the program, choosing and using an advisory committee, marketing the program, addressing educator issues and concerns, assessing educational needs, dealing with content-specific issues, meeting individual needs, attending to cultural competency, meeting the needs of special populations, choosing educational materials, facilitating group sessions, enhancing teaching skills, and challenging patients. ■



NIDDK Issues Report on Special Funding for Type 1 Diabetes Research

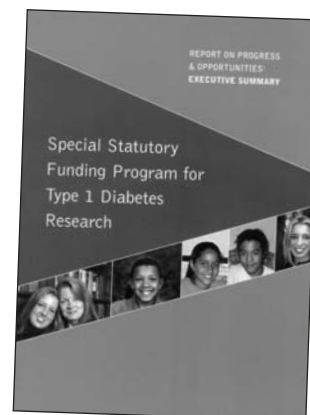
The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) has published a report titled *Special Statutory Funding Program for Type 1 Diabetes Research: Report on Progress & Opportunities*. It describes the recent achievements, ongoing collaborative projects, and future opportunities in type 1 diabetes research made possible through a total of \$390 million in special Federal funding for Fiscal Years* 1998 through 2003. Recent legislation extended the program and provided total funding of \$750 million for Fiscal Years 2004 through 2008. The report details progress and describes the research groups involved for each of the following goals:

- identifying the genetic and environmental causes of type 1 diabetes
- preventing or reversing type 1 diabetes
- developing cell replacement therapy

- preventing or reducing hypoglycemia in type 1 diabetes
- preventing or reducing the complications of type 1 diabetes
- attracting new talent to research on type 1 diabetes

The research program was planned by a collaborative group led by NIDDK and included the Centers for Disease Control and Prevention, the Food and Drug Administration, the Agency for Healthcare Research and Quality, the Juvenile Diabetes Research Foundation International, and the American Diabetes Association.

Single copies of the full report or its executive summary may be ordered free of charge by calling the National Diabetes Information Clearinghouse at 1-800-860-8747. Both the full report and the executive summary can also be found at www.niddk.nih.gov/federal/planning/type1_specialfund. ■



*A fiscal year is October 1 to September 30.

Progress Report on Diabetes Research Published

The National Institute of Diabetes and Digestive and Kidney Diseases has made available *Conquering Diabetes: Highlights of Program Efforts, Research Advances and Opportunities—A Scientific Progress Report on the Dia-*

betes Research Working Group's Strategic Plan.

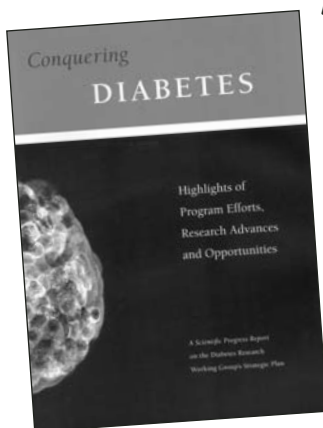
This report describes the steps taken by the National Institutes of Health to implement the scientific recommendations made by the Diabetes Research Working Group (DRWG), an independent, non-government panel of experts who issued a 5-year strategic plan

in 1999. The areas identified as priorities for research were

- the genetics of diabetes
- autoimmunity and the beta cell
- cell signaling and cell regulation
- obesity
- clinical research and clinical trials

The DRWG also made recommendations concerning special needs for diabetes-related problems.

A single copy of the full report or its executive summary can be ordered free of charge by calling the National Diabetes Information Clearinghouse at 1-800-860-8747. Both the full report and the executive summary can also be found at www.niddk.nih.gov/federal/dwg/2002/dwg02.htm. ■



Small Steps. Big Rewards. Prevent Type 2 Diabetes Campaign Is Making Big Strides

“**G**et Real! You don’t have to be a marathon runner or eat like a bird to prevent diabetes!” That’s the key message in the National Diabetes Education Program’s (NDEP) “Small Steps. Big Rewards. Prevent Type 2 Diabetes” campaign.



Launched in November 2002 by HHS Secretary Tommy G. Thompson, the campaign has reached millions of Americans with television and print public service ads (PSAs) and with stories about diabetes prevention in publications such as *The Wall Street Journal*, *Woman's Day*, and *Essence Magazine*.

The “Small Steps. Big Rewards.” campaign translates the findings of the Diabetes Prevention Program (DPP). This major NIH-funded clinical trial found that over the 3 years of the study, moderate weight loss through a low-fat diet and 30 minutes of physical activity on most days sharply reduced the chances that a person with impaired glucose tolerance (or pre-diabetes) would go on to develop diabetes.

NDEP is taking the lead in the Department of Health and Human Services to promote this important prevention message to people at risk for diabetes and their families, to health care providers, and to payers and purchasers of care. A group of DPP behavioral researchers has worked with NDEP to develop practical, easy-to-use lifestyle educational materials based on the strategies used in the DPP. In addition, members of the Medical Fitness Association and the Bureau of Primary Health Care Diabetes Prevention Collaborative assisted NDEP in assessing the materials by distributing them among their patients and providers and collecting their comments.

The diabetes prevention education materials are compiled in the “Small Steps. Big Rewards.” GAME PLAN toolkit for health care providers. GAME PLAN stands for

Goals, Accountability, Monitoring and Effectiveness: Prevention through a Lifestyle of Activity and Nutrition

Each toolkit contains

- a “how to” guide with suggestions for helping patients with behavior change
- information on diabetes prevention, including risk factors and a decision pathway for identifying those at risk
- an office poster with the “Get Real” message to encourage interest from patients
- 3 sets of GAME PLAN booklets for patients:
 - *Small Steps. Big Rewards. Your GAME PLAN for Preventing Type 2 Diabetes* (lists risk factors, gives information on setting goals, and provides tips on starting a walking program)
 - *Am I at Risk for Type 2 Diabetes?* (presents basic information on pre-diabetes and diabetes, a list of risk factors, and a body mass index chart to use in determining whether patients are overweight)
 - *Food and Activity Tracker* (a logbook for recording food intake and physical activity)
 - *Small Steps. Big Rewards. Fat and Calorie Counter* (a reference booklet of calorie and fat gram values)

Copier-ready versions of several of these booklets are also available in the kit. In addition, health professionals can purchase a two-CD set of the printed materials. All materials are copyright free and can be reproduced without permission. To view materials and the PSA online, go to www.ndep.nih.gov/get-info/dpi.htm. For information on ordering the materials, go to www.ndep.nih.gov or call the National Diabetes Information Clearinghouse at 1-800-860-8747.

To obtain additional print materials related to diabetes prevention, health care providers can now access the Lifestyle Manuals of Operations used by the DPP sites. Background materials, program ideas, and participant handouts are included. To view the DPP manuals, go to www.bsc.gwu.edu/dpp/manuals.html#doc. ■

NDEP Publishes New Guide Designed to Help Schools Manage Diabetes in Children

At last! A comprehensive guide for managing diabetes in the school setting is available from the National Diabetes Education Program (NDEP). *Helping the Student with Diabetes Succeed: A Guide for School Personnel* reflects a consensus from a broad spectrum of Federal agencies and leading organizations in the diabetes and education communities. The guide demonstrates how schools can better meet the medical needs of their students with diabetes while ensuring them access to all educational opportunities.

Since its publication in fall 2003, the school guide has received overwhelmingly positive response. "School nurses, administrators, and parents love this guide!" reports Joanne Gallivan, director of the NDEP for the National Institutes of Health. "The enthusiastic feedback we have received from hundreds of people across the country has been very gratifying, especially in light of the tremendous effort put forth by the partners involved in its development," said Gallivan.

The NDEP *Guide* was developed in response to problems reported to the American Diabetes

Association and others by both parents of students with diabetes and school personnel. Typical problems involved students who had no one to help them with daily diabetes care tasks (such as checking blood glucose levels or administering insulin) or to help them in case of a diabetes emergency. Other students were not permitted to self-manage their

diabetes. Still others were excluded from extracurricular events and field trips—or even told that they are not welcome at a particular school because they have diabetes.

Helping the Student with Diabetes Succeed: A Guide for School Personnel sets out a team approach to diabetes management in schools and outlines the roles and responsibilities of all key school personnel, including school nurses, administrators, teachers, coaches and physical education instructors, bus drivers, lunchroom staff, guidance counselors, as well as parents and students with diabetes. According to the guide, three key ingredients are needed to ensure successful teamwork:

1. All school staff members who have responsibility for students with diabetes have a basic understanding of the disease and the signs and symptoms of hypoglycemia and hyperglycemia.
2. The school nurse and/or other trained personnel are available to assist with routine and emergency diabetes care tasks.
3. Students with diabetes have the ability and are empowered to self-manage their disease as appropriate.

A comprehensive primer provides information about diabetes and reviews the components for planning and implementing diabetes management in school. Also included are sample medical and emergency tools for use in the school setting and information about the key Federal laws that address schools' responsibilities to students with diabetes.

Helping the Student with Diabetes Succeed: A Guide for School Personnel is supported by the following agencies and organizations:

American Academy of Pediatrics
American Association for Health Education
American Association of Diabetes Educators
American Diabetes Association



American Dietetic Association
American Medical Association
Barbara Davis Center for Childhood Diabetes
Centers for Disease Control and Prevention
Indian Health Service
Juvenile Diabetes Research Foundation
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Lawson Wilkins Pediatric Endocrine Society
National Association of Elementary School
Principals
National Association of School Nurses
National Association of Secondary School
Principals
National Association of State Boards of Education
National Diabetes Education Program
National Education Association Health
Information Network

National Institute of Diabetes and Digestive and
Kidney Diseases, National Institutes of Health
U.S. Department of Education

To order a free copy of the school guide, call
the National Diabetes Education Program at
1-800-438-5383. Single copies are free; addition-
al copies cost \$3, with a six-copy limit. You can
also download a copy of the school guide from the
NDEP website at [www.ndep.nih.gov/resources/
school.htm](http://www.ndep.nih.gov/resources/school.htm).

The NDEP is sponsored by the U.S. Department
of Health and Human Services' (HHS) National
Institutes of Health (NIH) and the Centers for
Disease Control and Prevention (CDC) and
involves more than 200 public and private sector
partners who work at the national, state, and
local level. ■

TREATMENT GOALS, *continued from page 1*

Although the percentage of people with diagnosed diabetes taking blood pressure medication has risen in the past decade, only 36 percent of participants in the most recent NHANES met ADA's current blood pressure goal of less than 130/80 mmHg, and 40 percent had high blood pressure. More participants in the later survey were also receiving medication to lower high cholesterol, but 52 percent still had total cholesterol levels above 200 mg/dL.

The NHANES surveys did not ask participants which type of diabetes they had. According to the recently updated *National Diabetes Statistics* fact sheet, 18.2 million people—6.3 percent of the population—have diabetes. Type 2 diabetes accounts for up to 95 percent of all diabetes cases. Most common in adults over age 40, this form of diabetes is strongly linked to obesity, inactivity, family history of diabetes, and racial or ethnic background.

Diabetes is the main cause of kidney failure, limb amputations, and new onset blindness in adults and is a major cause of heart disease and stroke.

Many clinical trials have proven that these complications can be dramatically reduced with good control of blood glucose, blood pressure, and cholesterol. National campaigns such as the National Diabetes Education Program's "Be Smart About Your Heart. Control the ABCs of Diabetes" (A1C, Blood Pressure, and Cholesterol) (www.ndep.nih.gov) have led to a wider awareness of the need to control the risk factors for diabetes complications. But more needs to be done, the study's authors conclude.

"We must redouble our efforts to empower patients and providers with information and tools to improve therapy and to provide incentives for the comprehensive care that has been proven effective in reducing diabetes complications," said coauthor Dr. Judith Fradkin, director of NIDDK's Diabetes, Endocrinology, and Metabolic Diseases Division.

The study was conducted by Drs. Fradkin and Cowie of the NIDDK and Dr. Sharon Saydah of Social and Scientific Systems, Inc. The work was funded by NIDDK, one of the National Institutes of Health under the U.S. Department of Health and Human Services. ■

NDIC Publications List

Patient Education Fact Sheets

Single copies free. Packages of 25, \$5 each.

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DM-232	Diabetes Prevention Program
DM-116	Diabetic Neuropathies: The Nerve Damage of Diabetes
DM-147	Erectile Dysfunction
DM-213	Financial Help for Diabetes Care
DM-196	Gastroparesis and Diabetes
DM-167	Hypoglycemia
DM-227	Insulin Resistance and Pre-Diabetes
DM-168	Kidney Disease of Diabetes

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DM-206	Keep Your Heart and Blood Vessels Healthy
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DM-209	Keep Your Teeth and Gums Healthy
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DM-229	Kidney Disease of Diabetes (Packages of 25, \$5 each.)
DM-193	Medicines for People With Diabetes
Prevent Diabetes Problems:	
DM-217	Keep Your Diabetes Under Control
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DM-219	Keep Your Feet and Skin Healthy
DM-220	Keep Your Heart and Blood Vessels Healthy
DM-221	Keep Your Kidneys Healthy
DM-222	Keep Your Nervous System Healthy
DM-223	Keep Your Teeth and Gums Healthy
DM-233	What I need to know about Eating and Diabetes
DM-230	Your Guide to Diabetes: type 1 and type 2

Statistics

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DM-96	Diabetes in America, 2nd edition (Book, \$20)
DM-215	Diabetes in American Indians and Alaska Natives
DM-216	Diabetes in Asian and Pacific Islander Americans
DM-114	Diabetes in Hispanic Americans
DM-163	National Diabetes Statistics

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NHLBI Announces New Treatment Guidelines for High Blood Pressure

The National Heart, Lung, and Blood Institute (NHLBI) has issued new clinical practice guidelines for the prevention, detection, and treatment of high blood pressure. NHLBI's target of less than 130/80 for people with diabetes and chronic kidney disease is in line with the current recommendations of the American Diabetes Association, the National Institute of Diabetes and Digestive and Kidney Diseases, the National Diabetes Education Program, and the National Kidney Disease Education Program.

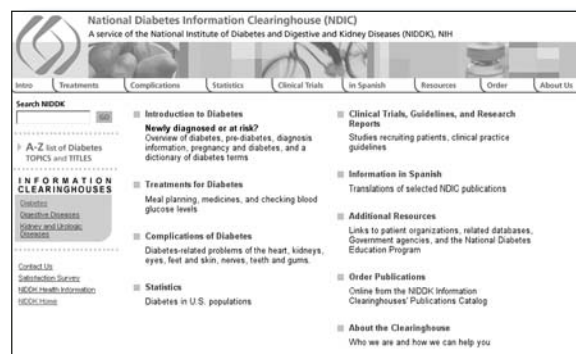
These NHLBI guidelines, titled *The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure* (JNC 7), released in spring 2003, establish

a new "prehypertension" category, a classification that applies to about 45 million Americans whose blood pressure is between 120–139 over 80–89 mmHg. Experts hope that highlighting this stage of abnormal blood pressure will prompt those at risk to take action early, thereby preventing damage to the arteries. The report also includes new definitions of other blood pressure categories, as well as other recommendations for using medications and suggestions on setting goals and creating treatment plans with patients.

Information about the guidelines, along with a slide show, patient education brochures, and other related materials can be viewed online at www.nhlbi.nih.gov/guidelines/hypertension/index.htm. ■

NDIC Website Wins Award

The National Diabetes Information Clearinghouse (NDIC) website www.diabetes.niddk.nih.gov was recently awarded a Gold certificate, the highest possible award, by the World Wide Web Health Awards Program. A panel of judges evaluated each entry for content and creativity and also provided an overall assessment. Awards were then based on averaged scores. NDIC's website received the only Gold award in the government section of the Patient Education Information division. ■



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